

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Lifeline and Link Up Reform and Modernization)	WC Docket No. 11-42
)	
Federal-State Joint Board on Universal Service)	CC Docket No. 96-45
)	
Lifeline and Link Up)	WC Docket No. 03-109

COMMENTS OF BOX TOP SOLUTIONS, INC.

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April 21, 2011

Box Top Solutions, Inc. (“Box Top”) hereby submits these Opening Comments in response to the Federal Communications Commission (“FCC”) Notice of Proposed Rulemaking (“NPRM”) released March 4, 2011.¹ Specifically Box Top is addressing the FCC’s proposal to establish pilot projects that will increase broadband adoption by low-income residents while not increasing the overall size of the Lifeline and Link Up programs. Box Top strongly agrees with the FCC’s conclusion that the only feasible way to address the diverse barriers creating the digital divide is to foster public-private initiatives.

The NPRM correctly recognizes that access to broadband will play an increasingly vital role in Americans’ access to education, healthcare, public and private services, and commerce. Yet there is a substantial disparity among consumers who can and cannot afford broadband, and the divide is getting worse. The FCC’s data shows that more than twice as many higher income households (earning more than \$75,000 per year) have access to broadband than lower income households (earning less than \$20,000 per year). The primary obstacle to adoption is cost.² Not only is the cost of bandwidth daunting, but the cost of even a low-end computer is often cost prohibitive for those with limited incomes.³ Further, citizens lacking broadband often report that a lack of digital skills is a barrier.⁴ Therefore, any solution to closing the digital divide must address the lack of end-user equipment needed to access the Internet in addition to the high cost of bandwidth, as well as encourage development of meaningful, easy to use content and services.

Box Top strongly agrees with the FCC’s conclusion that government subsidies will not be a sustainable mechanism to ensure universal access to broadband, and that instead, limited government dollars should be put toward fostering public-private partnerships between carriers and entrepreneurs.⁵ Because carriers may not be aware of technology solutions developed

¹ *In Re Lifeline and Link Up Reform and Modernization*, WC Docket No. 11-41, Federal-State Joint Board on Universal Service, CC Docket No. 96-45, Lifeline and Link Up WC Docket No. 03-109, Notice of Proposed Rulemaking (rel. March 4, 2011) (“NPRM”).

² NPRM, at ¶¶ 11,266,

³ *In Re Connect America Fund*, et al., WC Docket No. 10-90, Notice of Proposed Rulemaking and Further Notice of Proposed Rulemaking, FCC 11-13, ¶141 (rel. Feb. 9, 2011).

⁴ NPRM, at ¶268.

⁵ NPRM, at ¶267.

outside of their existing technology labs or vendors, the FCC could play an important role as a clearinghouse to match carriers with entrepreneurs who can offer technical solutions to the digital divide. Further, the FCC could be instrumental in offering carriers incentives (whether regulatory or financial) to collaborate with technologists to expand the reach of broadband.

Box Top has developed a technology-neutral solution, called FreeBand, to connect the unconnected by leveraging existing devices frequently found in homes of lower income citizens – a television set, an RJ-11 telephone jack, mobile phones and a familiarity with using applications on those phones. To address the lack of computers, Box Top has developed a “universal gateway” that combines a modem with the computing elements of a personal computer (CPU, video graphics, memory) to create a very low cost computer without an expensive monitor. The television screen substitutes for a computer monitor, and the key pad on a cellular phone can be used for input if a wireless keyboard would be cost prohibitive.

Applications based on the Android operating system reside on the universal gateway and support local capabilities such as word processing and calendars, as well as remote access to the vast resources available via the Internet, such as distance learning, tele-health, government services and commercial goods and services. These applications (developed using an application development kit provided by Box Top) include a metering function that keeps track of the amount of bandwidth used. The service/content providers reimburse the customer for some or all of the bandwidth costs. In return, the service/content provider achieves organic growth by enabling a completely new set of customers to reach them via the Internet.

The Box Top platform for the first time makes it possible to pay for bandwidth in discrete units rather than incurring the costs for an always-on, all or nothing broadband service. By using applications rather than web browsers, providers have a low-cost, dynamic way to create services and content that is tailored (and easily changed) to meet the needs and interests of specific demographics, thereby making the Internet highly relevant to currently unconnected consumers.

Box Top’s solution is technology neutral, so that it could partner with a range of communications providers including DSL, wireless (cellular, 3G, 4G), cable or satellite to access

the Internet from fixed locations such as the consumer's home, or the applications can be added to mobile phones. Box Top's technology could provide a substantial part of the solution to closing the digital divide. However, many carriers that Box Top has approached are reluctant to commit resources to serve a demographic that has been historically difficult to serve due to fears that they might have to subsidize such service if the number of service/content providers is insufficient to cover the entire monthly cost of bandwidth.

The FCC could be a significant catalyst for carrier adoption of technologies such as FreeBand in several ways. First, the FCC should revise the definition of Lifeline to include access to broadband service so that universal service funds can be directed to carriers (or consumers themselves – *e.g.*, through the availability of “pre-paid” broadband data cards) to be spent on providing free or very low cost broadband to low-income households. Box Top agrees with the NPRM proposal that low-income consumers should have the option to direct their universal service funding to a data-only plan⁶ since both voice and data can be provided via broadband. Box Top envisions that universal service support levels would not need to be increased to support broadband, because these funds would be used in conjunction with service/content provider reimbursements for bandwidth costs.

Second, the FCC should move forward rapidly to initiate broadband pilot programs. Box Top strongly agrees with the FCC's proposed approach of soliciting cooperation from a variety of participants, including carriers, equipment manufacturers, application developers and government agencies. Box Top does not believe that the FCC need be involved in the specific design of the pilots, since technologists are likely in the best position to efficiently do such work. The FCC, however, should play a strong role in creating incentives for carriers to participate, in identifying demographic and geographic groups most in need of broadband access and in identifying the type of data to be collected during the pilot. The FCC could also play a vital role in outreach to government agencies and non-profit groups that have existing programs for

⁶ NPRM, at ¶278.

increasing citizen well being (e.g., literacy skills, including basic reading and digital literacy skill sets) to participate in the pilots.⁷

Box Top suggests that the FCC's broadband pilots should be designed to test a variety of communications methods, geographic areas and demographic groups. The FCC should set timeframes for applicants to design and roll out the pilot. A period of six months should be more than sufficient for planning and the pilot itself should last one year.

Third, the FCC should not limit pilot funding to ETCs. Traditional carriers may not be aware of technology solutions developed outside of their existing technology labs or vendors, so the FCC should allow technology companies that are not ETCs to receive pilot funding so long as they partner with carriers that are ETCs. Awarding funding to non-ETCs would create a powerful incentive for ETCs to actively seek out and to partner with the funding recipients.

The FCC could serve as an important catalyst to encouraging carriers to collaborate with entrepreneurs and service/content providers to encourage universal access to broadband service. Box Top respectfully suggests that adopting its three recommendations above will help ensure the success of the FCC's efforts to connect the unconnected.

Dated: April 21, 2011

Respectfully submitted,

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⁷ Box Top is currently exploring the development of a free application available to consumers through its FreeBand platform that would assist consumers with basic literacy skills. One example of the way in which the FCC could use the Lifeline program to assist with such effort would be to establish a clearinghouse of agencies non-profit organizations with existing expertise in literacy programs that would be willing to collaborate on such applications.